Textbook Alignment to the Utah Core – Fifth Grade Science

This alignment has been completed using an "Independent Alignment Vendor" from the USOE approved list (www.schools.utah.gov/curr/imc/indvendor.html.) Yes _____ No __X___

Name of Company and Individual Conducting Alignment: Independent Contract, Lori Catan_____

A "Credential Sheet" has been completed on the above company/evaluator and is (Please check one of the following):

☐ On record with the USOE.

X The "Credential Sheet" is attached to this alignment.

Instructional Materials Evaluation Criteria (name and grade of the core document used to align): Fifth Grade Science Core Curriculum

Title: _____HSP Science_____ ISBN#: 9780153609411; 9780153609633

Publisher: _____*Harcourt School Publishers*_____

Overall percentage of coverage in the *Student Edition (SE) and Teacher Edition (TE)* of the Utah State Core Curriculum: ____100_____%

Overall percentage of coverage in *ancillary materials* of the Utah Core Curriculum: _____92_____%

STANDARD I: Students will understand that chemical and physical changes occur in matter.				
Percentage of coverage in the *student and teacher edition* for Standard I:_____100_____ %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard I: _____0_____%**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries*** ✓
Objective 1.1: Describe that matter is neither created nor destroyed even though it may undergo change.				
a.	Compare the total weight of an object to the weight of its individual parts after being disassembled.	E 520-521, 522-523	BL Book 14: 4 LM: 144-146 AG: 106 RS: 90	
b.	Compare the weight of a specified quantity of matter before and after it undergoes melting or freezing.	E 532-533	LM: 147-148 AG: 103	
c.	Investigate the results of the combined weights of a liquid and a solid after the solid has been dissolved and then recovered from the liquid (e.g., salt dissolved in water then water evaporated).	E 538-539	BL Book 14: 16 AG: 107-108	
d.	Investigate chemical reactions in which the total weight of the materials before and after reaction is the same (e.g., cream and vinegar before and after mixing, borax and glue mixed to make a new substance).	E 548, 549	BL Book 14: 23	
Objective 1.2: Evaluate evidence that indicates a physical change has occurred.				
a.	Identify observable evidence of a chemical reaction (e.g., color change, heat or light given off, heat absorbed, gas given off).	E 542-543, 544-545, 546-547, 549, 568-569	OL Book 14: 14-15 LM: 150-152 RS: 94-95 Transparency DI 30	
b.	Explain why the measured weight of a remaining product is less than its reactants when a gas is produced.	E 548, 552	BL Book 14: 23 AG: 104	

c.	Cite examples of chemical reactions in daily life.	E	192-193, 542-543, 544, 546-549, 567, 572	BL Book 14: 18-23, 25 RS: 94-95 AG: 106 ESL: 165	
d.	Compare a physical change to a chemical change.	E	544-545, 547, 549	BL Book 14: 10-24 OL Book 14: 8-17 LM: 150-152 RS: 89, 92-93, 94-95 AG: 103-106 ESL: 164-165, 170-171	
e.	Hypothesize how changing one of the materials in a chemical reaction will change the results.	E	545	BL Book 14: 22 LM: 150-152	

STANDARD II: Students will understand that volcanoes, earthquakes, uplift, weathering, and erosion reshape Earth's surface.				
Percentage of coverage in the *student and teacher edition* for Standard II:_____100_____ %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard II: _____0_____%**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries*** ✔
Objective 2.1: Describe how weathering and erosion change Earth's surface.				
a.	Identify the objects, processes, or forces that weather and erode Earth's surface (e.g., ice, plants, animals, abrasion, gravity, water, wind).	C 252-255, 258-259, 270-271, 282-283, 284, 286-287, 289, 291, 294-295, 326-327, 332-335, 336-337, 338-339, 340-347, 360-361, 362-363, 382-383, 390 D 391, 391A-B, 452-453, 454-455, 456-457-458, 461	BL Book 7: 18-19, 20-21, 24 BL Book 9: 2-3, 6-7, 10-17, 28, 29 BL Book 12: 18-21, 25 OL Book 7: 8, 12-13, 16 OL Book 9: 6-7, 8-11, 15, 17 OL Book 12: 12-13 LM: 85-87, 97-99, 109-112, 128-130 RS: 42, 45-46, 47-48, 55-56, 57-58, 79-80 AG: 61-64, 87-88	
b.	Describe how geological features (e.g., valleys, canyons, buttes, arches) are changed through erosion (e.g., waves, wind, glaciers, gravity, running water).	C 270-271, 282-283, 286-287, 289, 291, 326-327, 328-329, 333-335, 336-337, 338-339, 340-347, 362-363, 390 D 391, 391A-B, 440, 448-449, 454-455, 456-457, 458-459, 465	BL Book 7: 18-19, 20-21 BL Book 9: 2-3, 6-7, 8-9, 10-17 BL Book 12: 18-21, 25 OL Book 7: 12-13 OL Book 9: 3, 6-7, 10, 17 OL Book 12: 12-13 AL Book 8: 2	

			LM: 94-96, 109-112, 128-130 RS: 42, 45-46, 47-48, 55-56, 57-58, 79-80 AG: 50, 52, 61-64, 87-88	
c.	Explain the relationship between time and specific geological changes.	C 281, 302-303, 304, 306-307, 328-329, 333, 335, 358, 362-363, 390	BL Book 7: 20-21 BL Book 8: 4-6 OL Book 7: 12-13 OL Book 8: 2-3, 8-9 AL Book 8: 2-3, 13-16 LM: 89-90, 95-96 RS: 50-51, 57-58	
Objective 2.2: Explain how volcanoes, earthquakes, and uplift affect Earth's surface.				
a.	Identify specific geological features created by volcanoes, earthquakes, and uplift.	C 348-349, 350-351, 352, 354-355, 356-357, 358, 390 D 439, 440, 462 E 530-531	BL Book 9: 18-27 BL Book 12: 23 OL Book 9: 14-15, 16, 17 AL Book 8: 4-6 AL Book 12: 12-15 LM: 100-102 RS: 54, 59-60 AG: 61-64	
b.	Give examples of different landforms that are formed by volcanoes, earthquakes, and uplift (e.g., mountains, valleys, new lakes, canyons).	C 331, 332, 334, 348-349, 355, 356-357, 358, 359, 390 D 439, 440	BL Book 9: 18-27 AL Book 12: 12-15 RS: 50, 59 AG: 62, 65-66	
c.	Describe how volcanoes, earthquakes, and uplift change landforms.	B 230-231 C 310, 349, 354-355, 356-357, 358, 359, 390 D 440, 447	BL Book 9: 18-27 OL Book 9: 14-15 AL Book 8: 4-6 LM: 100-102 RS: 59-60 AG: 61-64, 65-66	
d.	Cite examples of how technology is used to predict volcanoes and earthquakes.	D 355, 356	LM: 101-102 AG: 63	

Objective 2.3: Relate the building up and breaking down of Earth's surface over time to the various physical land features.				
a.	Explain how layers of exposed rock, such as those observed in the Grand Canyon, are the result of natural processes acting over long periods of time.	C 270-271, 278-279, 293, 306-307, 309, 322, 334, 340-341, 363, 390	BL Book 7: 19, 20-21 BL Book 8: 4-6, 10-11 BL Book 9: 7, 11 OL Book 7: 12-13 OL Book 8: 8-9 AL Book 8: 2, 4-6, 12-15, 17 LM: 88-90 RS: 57-58 AG: 55-58	
b.	Describe the role of deposition in the processes that change Earth's surface.	C 271, 276-277, 283, 284-285, 291, 294-295, 306, 332-333, 336-337, 340-343, 345, 347, 338-339, 390 D 391, 391A-B	BL Book 7: 9, 12-13, 20, 24 BL Book 9: 6, 8, 10, 12-13, 16 BL Book 12: 18-21, 25 OL Book 7: 8-9, 15, 16, 17 OL Book 9: 6-11, 17 OL Book 12: 12-13 LM: 97-99, 109-112 RS: 42, 45-46, 47-48, 54, 57-58 AG: 49, 61-62, 87-88	
c.	Use a time line to identify the sequence and time required for building and breaking down of geologic features on Earth.	C 291, 309, 359	AL Book 8: 2-3	
d.	Describe and justify how the surface of Earth would appear if there were no mountain uplift, weathering, or erosion.	C 326-335, 336-347	OL Book 9: 2-3 AL Book 8: 5-6 LM: 95 AG: 63-64	

STANDARD III: Students will understand that magnetism can be observed when there is an interaction between the magnetic fields of magnets or between a magnet and materials made of iron.

Percentage of coverage in the *student and teacher edition* for Standard III: 100 %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard III: 0 %**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries*** ✓
Objective 3.1: Investigate and compare the behavior of magnetism using magnets.				
a.	Compare various types of magnets (e.g., permanent, temporary, and natural magnets) and their abilities to push or pull iron objects they are not touching.	E 604, 606-607, 610-611 F 669, 672-673	LM: 165-167 RS: 106-107	
b.	Investigate how magnets will both attract and repel other magnets.	E 606-607 F 680, 681		
c.	Compare permanent magnets and electromagnets.	E 610-611	RS: 106-107	
d.	Research and report the use of magnets that is supported by sound scientific principles.	E 610-611, 613	RS: 106-107	
Objective 3.2: Describe how the magnetic field of Earth and a magnet are similar.				
a.	Compare the magnetic fields of various types of magnets (e.g., bar magnet, disk magnet, horseshoe magnet).	E 622-624, 680 F 731	RS: 106-107	
b.	Compare Earth's magnetic field to the magnetic field of a magnet.	E 606 F 680		
c.	Construct a compass and explain how it works.	F 621, 680		

d.	Investigate the effects of magnets on the needle of a compass and compare this to the effects of Earth's magnetic field on the needle of a compass (e.g., magnets effect the needle only at close distances, Earth's magnetic field affects the needle at great distances, magnets close to a compass overrides the Earth's effect on the needle).	E 611 F 680, 681		

STANDARD IV: Students will understand features of static and current electricity.				
Percentage of coverage in the *student and teacher edition* for Standard IV:_____100_____ %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard IV: _____0_____%**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition(SE) and Teacher Edition (TE) (*pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries*** ✓
Objective 4.1: Describe the behavior of static electricity as observed in nature and everyday occurrences.				
a.	List several occurrences of static electricity that happen in everyday life.	E 614, 616, 618-619, 623	OL Book 16: 8-9 RS: 108-109	
b.	Describe the relationship between static electricity and lightning.	E 618-619, 620-621, 623	OL Book 16: 8-9 RS: 108-109	
c.	Describe the behavior of objects charged with static electricity in attracting or repelling without touching.	E 609, 619	OL Book 16: 8-9	
d.	Compare the amount of static charge produced by rubbing various materials together (e.g., rubbing fur on a glass rod produces a greater charge then rubbing the fur with a metal rod, the static charge produced when a balloon is rubbed on hair is greater than when a plastic bag is rubbed on hair).	E 619	RS: 108-109	
e.	Investigate how various materials react differently to statically charged objects.	E 619	RS: 108-109	

Objective 4.2: Analyze the behavior of current electricity.				
a.	Draw and label the components of a complete electrical circuit that includes switches and loads (e.g., light bulb, bell, speaker, motor).	E	624, 627	OL Book 16: 12-15 RS: 110-111 AG: 115-118, 119-120	
b.	Predict the effect of changing one or more of the components (e.g., battery, load, wires) in an electric circuit.	E	627, 628	OL Book 16: 12-15 RS: 110-111	
c.	Generalize the properties of materials that carry the flow of electricity using data by testing different materials.	E	621	OL Book 16: 12-15 RS: 108-109	
d.	Investigate materials that prevent the flow of electricity.	E	622	OL Book 16: 12-15 RS: 108-109	
e.	Make a working model of a complete circuit using a power source, switch, bell or light, and a conductor for a pathway.	E	515, 626-627	LM: 165-167 AG: 119-120	

STANDARD V: Students will understand that traits are passed from the parent organisms to their offspring, and that sometimes the offspring may				
Percentage of coverage in the *student and teacher edition* for Standard V:_____100_____ %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard V: _____0_____%**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries*** ✔
Objective 5.1: Using supporting evidence, show that traits are transferred from a parent organism to its offspring.				
a.	Make a chart and collect data identifying various traits among a given population (e.g., the hand span of students in the classroom, the color and texture of different apples, the number of petals of a given flower).	A 47, 137, 156-157, 160 C 319	BL Book 4: 14-15 OL Book 4: 4-5, 8-9 LM: 50-52	
b.	Identify similar physical traits of a parent organism and its offspring (e.g., trees and saplings, leopards and cubs, chickens and chicks).	A 98, 136, 142, 143, 158-159, 160-161, 167	BL Book 3: 10-19 BL Book 4: 10-21 LM: 50-52 RS: 24-25 AG: 19-22	
c.	Compare various examples of offspring that do not initially resemble the parent organism but mature to become similar to the parent organism (e.g., mealworms and darkling beetles, tadpoles and frogs, seedlings and vegetables, caterpillars and butterflies).	A 148-149	BL Book 3: 10-19 BL Book 4: 10-21 OL Book 4: 4-5, 8-9 LM: 50-52 RS: 24-25 AG: 19-22	
d.	Contrast inherited traits with traits and behaviors that are not inherited but may be learned or induced by environmental factors (e.g., cat purring to cat meowing to be let out of the house; the round shape of a willow is inherited, while leaning away from the prevailing wind is induced).	A 155, 156-157, 168-169, 170-171, 172-173, 174-175, 176, 177 B 212, 214	BL Book 3: 10-19 BL Book 4: 22-27 LM: 50-52, 53-55 RS: 24-25 AG: 19-22	
e.	Investigate variations and similarities in plants grown from seeds of a parent plant (e.g., how seeds from the same plant species can produce different colored flowers or identical	A 159, 179, 180, 195	BL Book 3: 10-19	

	flowers).			
Objective 5.2: Describe how some characteristics could give a species a survival advantage in a particular environment.				
a.	Compare the traits of similar species for physical abilities, instinctual behaviors, and specialized body structures that increase the survival of one species in a specific environment over another species (e.g., difference between the feet of snowshoe hare and cottontail rabbit, differences in leaves of plants growing at different altitudes, differences between the feathers of an owl and a hummingbird, differences in parental behavior among various fish).	A 94, 108, 109, 118, 133, 162-163, 164-165, 172-173, 174-175, 181 B 190-191, 195, 214-215, 216-217 C 316-317, 319, 323 D 457, 460	OL Book 4: 10-13 LM: 66-68 RS: 35-36 AG: 37-40	
b.	Identify that some environments give one species a survival advantage over another (e.g., warm water favors fish such as carp, cold water favors fish such as trout, environments that burn regularly favor grasses, environments that do not often burn favor trees).	A 116, 154 B 245 C 315 D 452	LM: 72-74 RS: 35-36, 37-38, 39-40 AG: 37-40	
c.	Describe how a particular physical attribute may provide an advantage for survival in one environment but not in another (e.g., heavy fur in arctic climates keep animals warm whereas in hot desert climates it would cause overheating; flippers on such animals as sea lions and seals provide excellent swimming structures in the water but become clumsy and awkward on land; cacti retain the right amount of water in arid regions but would develop root rot in a more temperate region; fish gills have the ability to absorb oxygen in water but not on land).	A 162-163, 164-165 B 214, 219 C 315, 321 D 425	BL Book 4: 16-19 RS: 35-36, 37-38, 39-40	
d.	Research a specific plant or animal and report how specific physical attributes provide an advantage for survival in a specific environment.	B 183, 193, 214, 217, 233 D 439, 441	BL Book 4: 16-19	